ABSTRACT

An improved scale conditioning composition and method is disclosed that results in improved dissolution and disruption of tube scale, hardened sludge and other deposits composed primarily of highly densified magnetite such as those found in heat exchange vessels, particularly steam generators. After treatment with the advanced scale conditioning composition, these magnetite rich deposits are more easily removed using known and commercially available high pressure hydro-mechanical cleaning techniques. The present invention further provides effective cleaning in a short period of time and at relatively low temperatures, while reducing the amount of waste produced and reducing the resulting corrosion of carbon and low alloy steel components within the steam generator during the cleaning process.